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For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US03/24238

A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : A61K 31/497; C12N 1/00, 1/12, 1/20; C12P 1/00, 17/00,
US CL : 435/41, 117, 243, 252.1; 514/252.1

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
U.S. : 435/41, 117, 243, 252.1; 514/252.1

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
IUBMB DATA BASE

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
Please See Continuation Sheet

C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category * | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|------------|--|------------------------------------|
| Y | PERAUD, O. et al. Microbial Community Analysis of a MArine Sponge that Contains the ANti-Malarial Compound Menzamine A. Abstract ASM 102nd Generl Meeting. 22 May 2002, Session 221/N, Abstract N-188, page 337. | 1, 4-6, 10-12, 14-17, 21-22, 24-28 |
| Y,P | YOUAF, M. et al. 12, 34 Oxamanzamines, Novel Biocatalytic and Natural Products from Manzamine Producing Indo-Pacific Sponges. Tetrahedron. 2002, pages 7397-7402. abstract, page 7399, Column 2, Lines 11-37 below Figure 1; Figure 1, Tables Tables 2 nd 3. | 1-28 |

Further documents are listed in the continuation of Box C.

See patent family annex.

| | | |
|---|-----|--|
| * Special categories of cited documents: | "T" | later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention |
| "A" document defining the general state of the art which is not considered to be of particular relevance | "X" | document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone |
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| "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) | "&" | document member of the same patent family |
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| "P" document published prior to the international filing date but later than the priority date claimed | | |

Date of the actual completion of the international search

11 May 2004 (11.05.2004)

Date of mailing of the international search report

09 JUL 2004

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INTERNATIONAL SEARCH REPORT

PCT/US03/24238

Continuation of B. FIELDS SEARCHED Item 3:

REGISTRY, BELLSTEIN, BIOSIS, BIOTECHNO, CA, CAPLUS, HCPLUS, EMBASE, JICST-EPLUS, MEDLINE, TOXCENTRE, USPATFULL, USPT, PGPB, EPB, JPAB, DWPI.

Search Terms:

conducted structure search in registry, manzamine with registry number (i.e., 81782-73-2) and chemical formula for manzamine and different forms of manzamine (e.g., 34 oxamanzamine A), actinomycete or filamentous bacteria or bacteria, anti-malaria compound.